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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/840,031	05/05/2004	Matthew J. Knox	11721-041	7769
40879	7590	06/30/2005	EXAMINER	
AUTOLIV ASP 3350 AIRPORT ROAD OGDEN, UT 84405			FIELD, LINDA PENA	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/840,031	KNOX, MATTHEW J.	
	Examiner	Art Unit	
	Linda Field	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 1,14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/5/04</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: On line 8, "the inertia body" lacks antecedent basis. On line 6, "the mass" lacks antecedent basis. Additionally, under 37 C.F.R. §1.83, Claim 1 is objected to for lacking to show the limitation "locking mechanism" in the drawings. Appropriate correction is required.

Claim 14 is objected to under 37 C.F.R. §1.83 which requires that the drawing in a non-provisional application must show every feature of the invention specified in the claims. Claim 14 is not illustrated or supported in the drawings. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1–12 is rejected under 35 U.S.C. 102(b) as being anticipated by Takada (4,314,680).

With respect to Claim 1, Takada (see Figure 1) teaches a housing (support (10)), an excitation mass (inertia mass (22)), a locking mechanism (an actuating tip portion (28a) that locks the belt retractor), a lever arm (a pawl (28)) and a damper (Column 5, lines 42–46, discloses the force conditions (frictional and pawl acceleration) serving as a damper in response to a given level of acceleration).

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Regarding Claim 2, Takada (see Figure 6) shows a spherical mass.

With respect to Claim 3, Takada (in Figure 1) shows an indentation in which the mass resides.

Regarding Claim 4, Takada (at Column 1 lines 50-51) reveals an indentation having an inclined surface for the mass to roll over.

Referring to Claim 5, Takada (see Figure 6) illustrates a hole or opening in the lever arm.

With respect to Claim 6, Takada (in Figure 4C) shows a non-spherical mass that pivots about a point on the housing.

As to Claim 7, Takada illustrates the mass moving the lever arm away from the pivot point as the mass pivots about the pivot point (see Figures 4C and 4D).

Regarding Claim 8, Takada (in Figures 1, 4A, 4B, 4C, 4D and 5) teaches a gap between the locking lever arm and the mass.

Referring to Claim 9, Takada (in Figures 4C and 4D) demonstrates that movement of the mass closes the gap.

With respect to Claim 10, Takada reveals a no lock zone when the gap is greater than zero (see Figures 4A and 4B).

Concerning Claim 11, Takada (in Figures 4C and 4D) discloses a lock zone when the gap is about zero.

Regarding Claim 12, Takada (in Figure 5) teaches one or more additional dampers (the upwardly extending projection (27"), a follower (28b"), in combination with the projection (24) serves as one or more additional dampers). Additionally, Takada (in

Figure 6) teaches one or more additional dampers (the cam follower projection (28b) and the conical cam surface (27') in combination with the projection (24) serves as one or more additional dampers).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takada as applied to claim 12 above, and further in view of Rogers (6,386,472).

With respect to Claim 13, Takada teaches the invention set forth above but lacks the additional damper providing opposing magnetic fields. Rogers teaches the additional damper providing opposing magnetic fields. (Rogers in Column 4, lines 42-62 teaches an electromagnet assembly cooperating with the mass member and functioning as a damper to hold the mass member in a predetermined position until the acceleration force exceeds a predetermined value. See Figures 4 & 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Takada apparatus and add the electromagnetic damper of Rogers to produce an acceleration sensor for a belt retractor that is de-sensitized and senses acceleration in three-dimensional space (see Column 1 lines 50-58).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takada as applied to claim 12 above, and further in view of Romanzi (3,901,459). With respect

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to Claim 14, Takada teaches the invention set forth above but lacks the spring as the additional damper. Romanzi teaches the spring as the additional damper. (Rogers in Column 1 lines 41-60 teaches a mass mounted on a frame and disposed to sense a change in vehicle velocity above a predetermined magnitude, a lever which enables a pawl to engage with a ratchet and a spring operatively associated with the mass to place some restraint upon the movement of the mass). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Takado invention and add the additional spring for use as a damper to produce an acceleration sensor for a belt retractor that senses acceleration in three-dimensional space (see Column 1 lines 40-59).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 4314680, 3901459, 5636807, 636472B1, 3758044, 4262858, 6647788B2, 5388464, 4879906, 4458920 and 5271639 discloses sensors relating to vehicle belts.

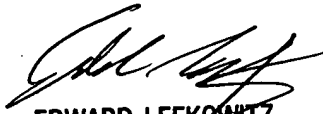
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Field whose telephone number is 571-272-2185. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LPF



EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800